

STEREO AMPLIFIER

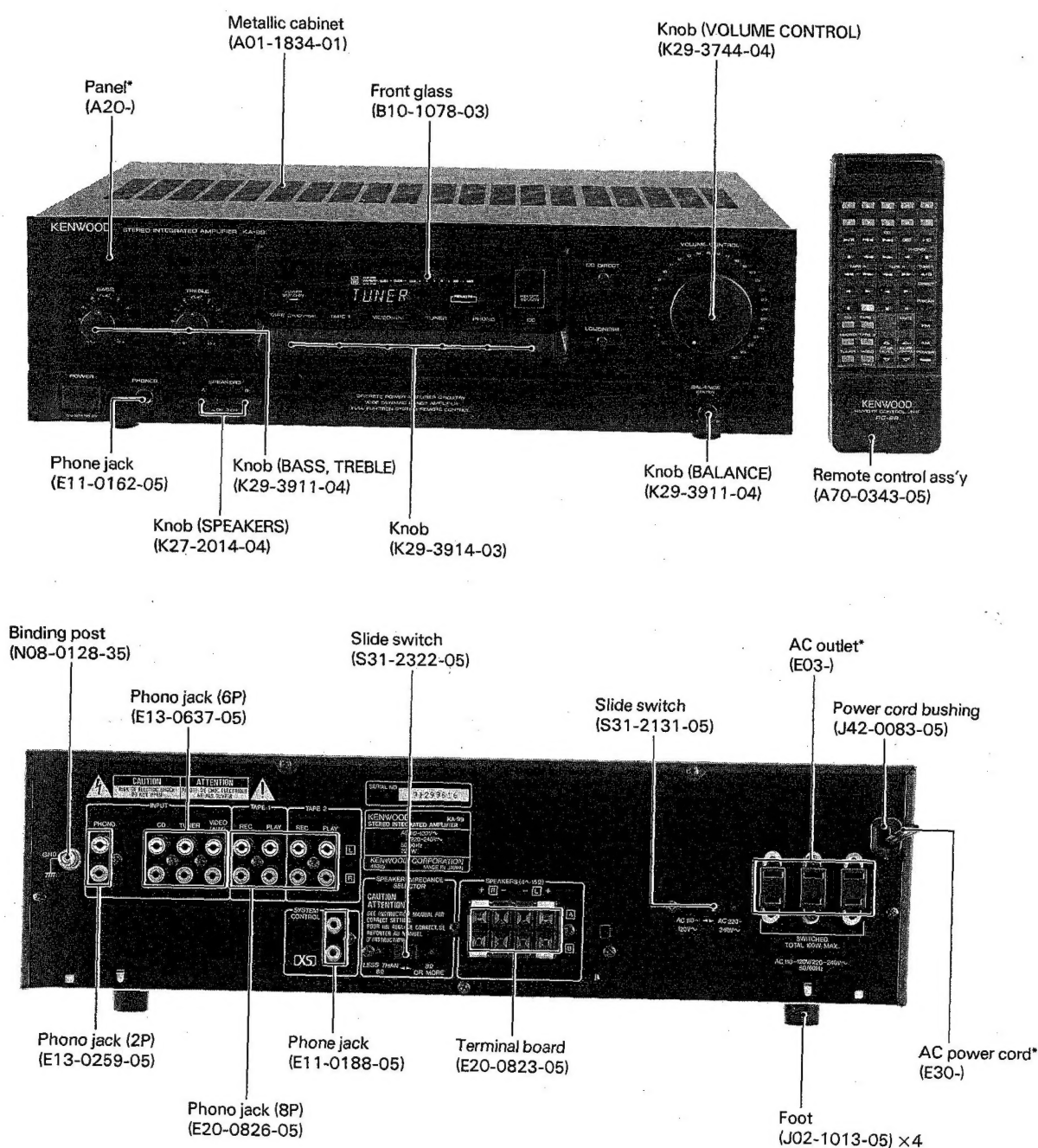
KA-99/KA-109

SERVICE MANUAL

KENWOOD

©1990-2 PRINTED IN JAPAN
B51-4080-00(S)1950

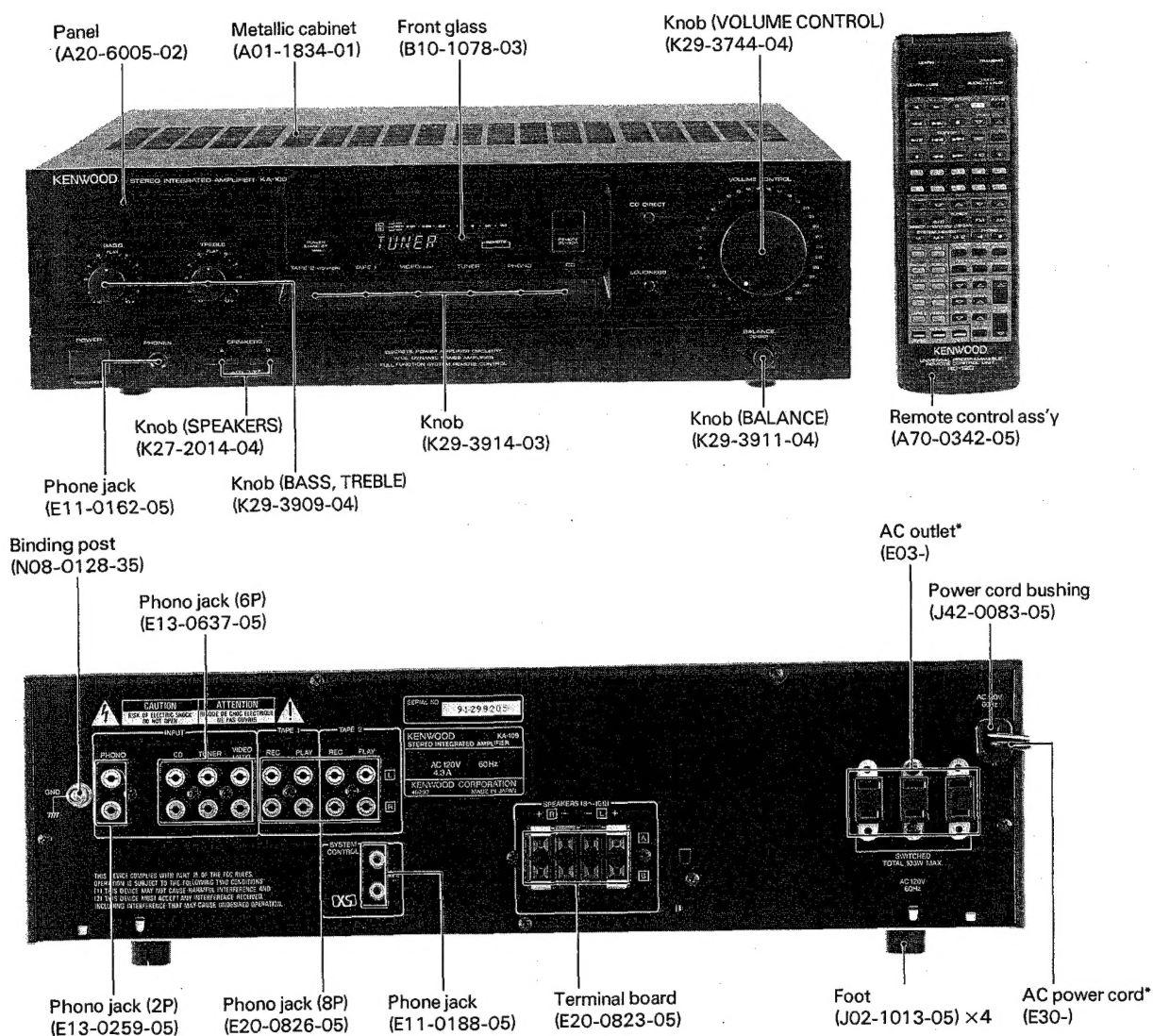
[KA-99]



* Refer to parts list on page 18.

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[KA-109]



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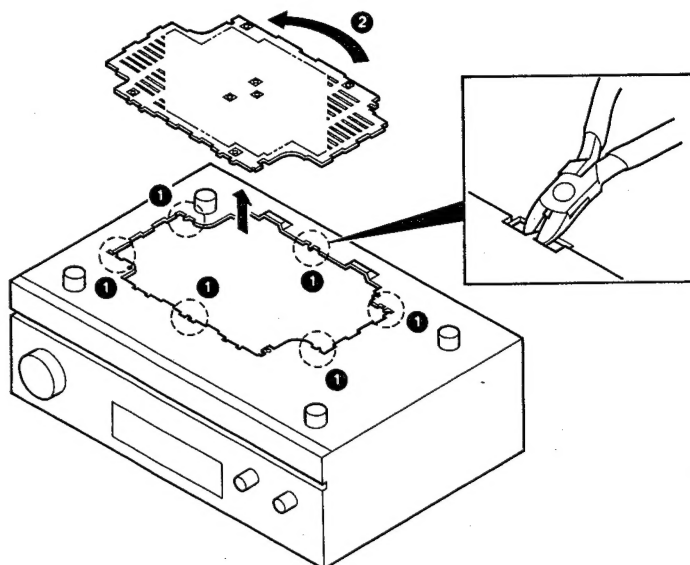
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DISASSEMBLY FOR REPAIR

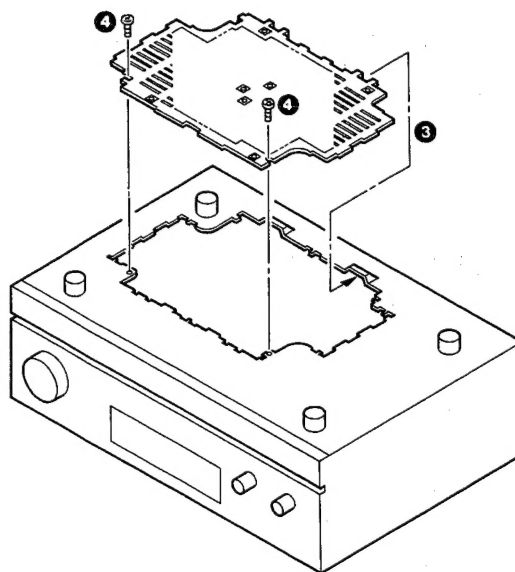
How to remove the repairing chassis

- 1 Cut the 6 parts ① of the repairing chassis. Remove the repairing chassis from main chassis.



After repair

- 2 Turn the repairing chassis 180 degrees in the arrow direction ②.
- 3 Insert the 2 claws ③ into main chassis.
- 4 Lock to the main chassis by 2 screws (M3 × 6) ④.



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ADJUSTMENT/REGLAGE/ABGLEICH

ADJUSTMENT

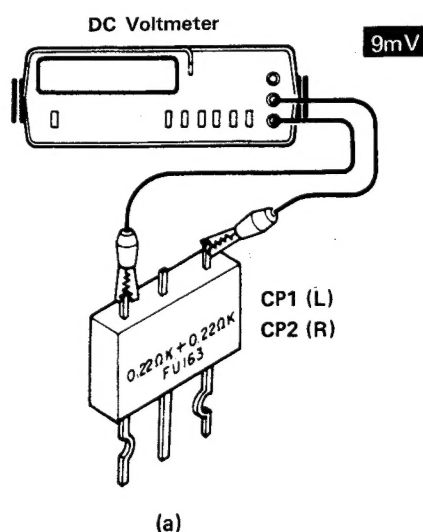
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Set the controls and switches as follows: POWER: ON SPEAKER: B							
1	IDLE CURRENT	—	Connect a DC voltmeter across CP1 (L) CP2 (R)	VOLUME: 0	VR1 (L) VR2 (R)	9mV	(a)

REGLAGES

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINTS L'ALIGNEMENT	ALIGNER POUR	FIG.
Régler les controles et les boutons comme suit: POWER: ON SPEAKER: B							
1	COURANT DE POLARISATION	—	Connecter un voltmètre de CC sur CP1 (G) CP2 (D)	VOLUME: 0	VR1 (G) VR2 (D)	9mV	(a)

ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VORSTÄRKER EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
Die Regler und Knöpfe wird folgt einstellen: POWER: ON SPEAKER: B							
1	LEERLAUFSTROM	—	Einen Gleichspannungsmesser über CP1 (L) CP2 (R) anschließen	VOLUME: 0	VR1 (L) VR2 (R)	9mV	(a)



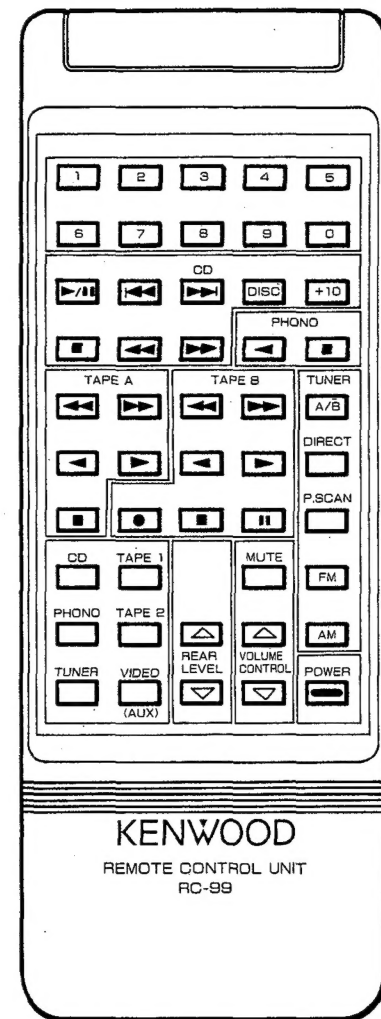
KA-99/KA-109

NAME AND OPERATION OF CONTROL

<KA-99>

Functions of keys

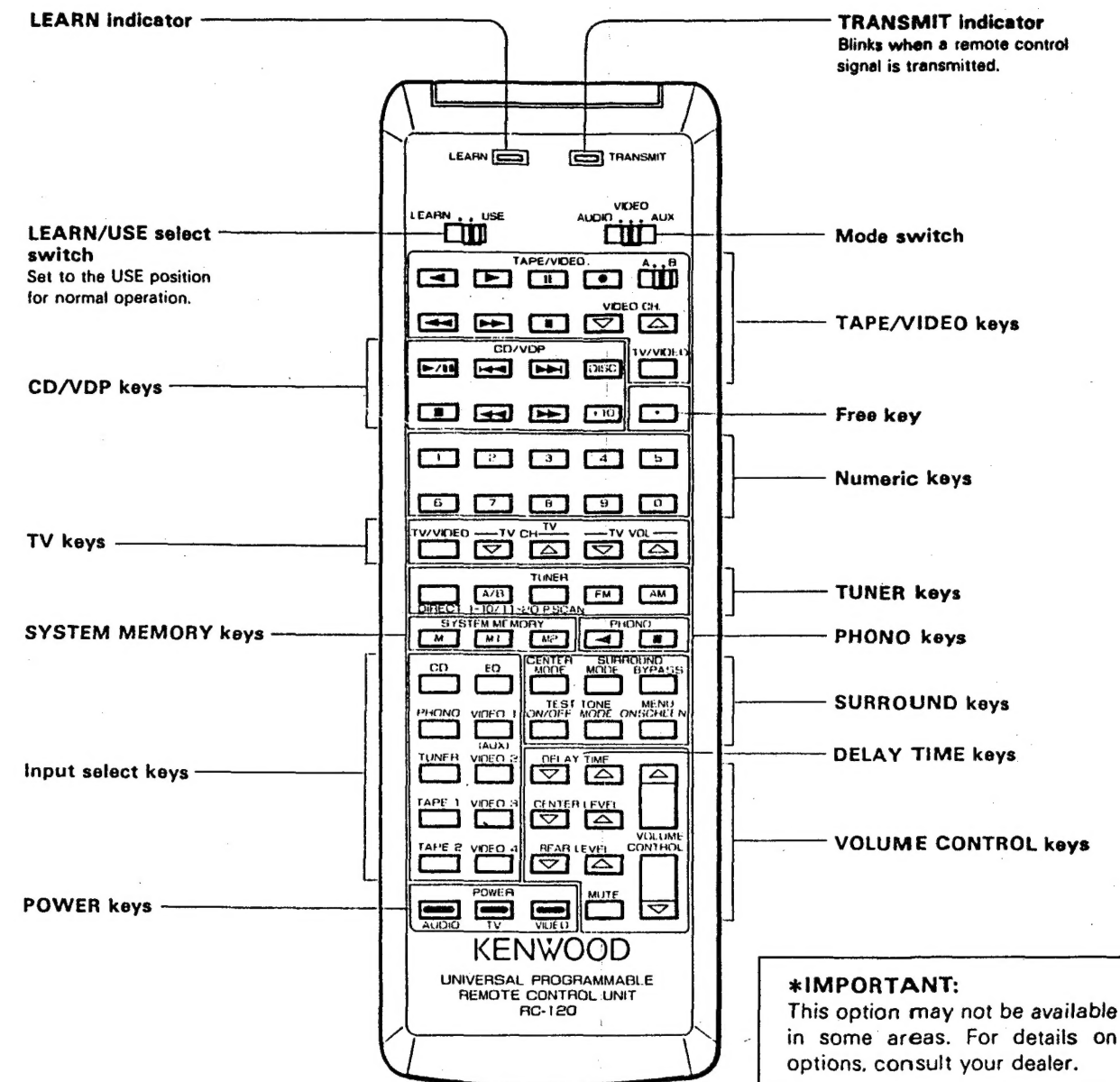
In case any of the following CD players is used, this remote control unit cannot be used to control the CD manual search function or to make entries with the numeric keys (1 to 0 and +10):
* DP-M97, DP-57, DP-47



KA-99/KA-109

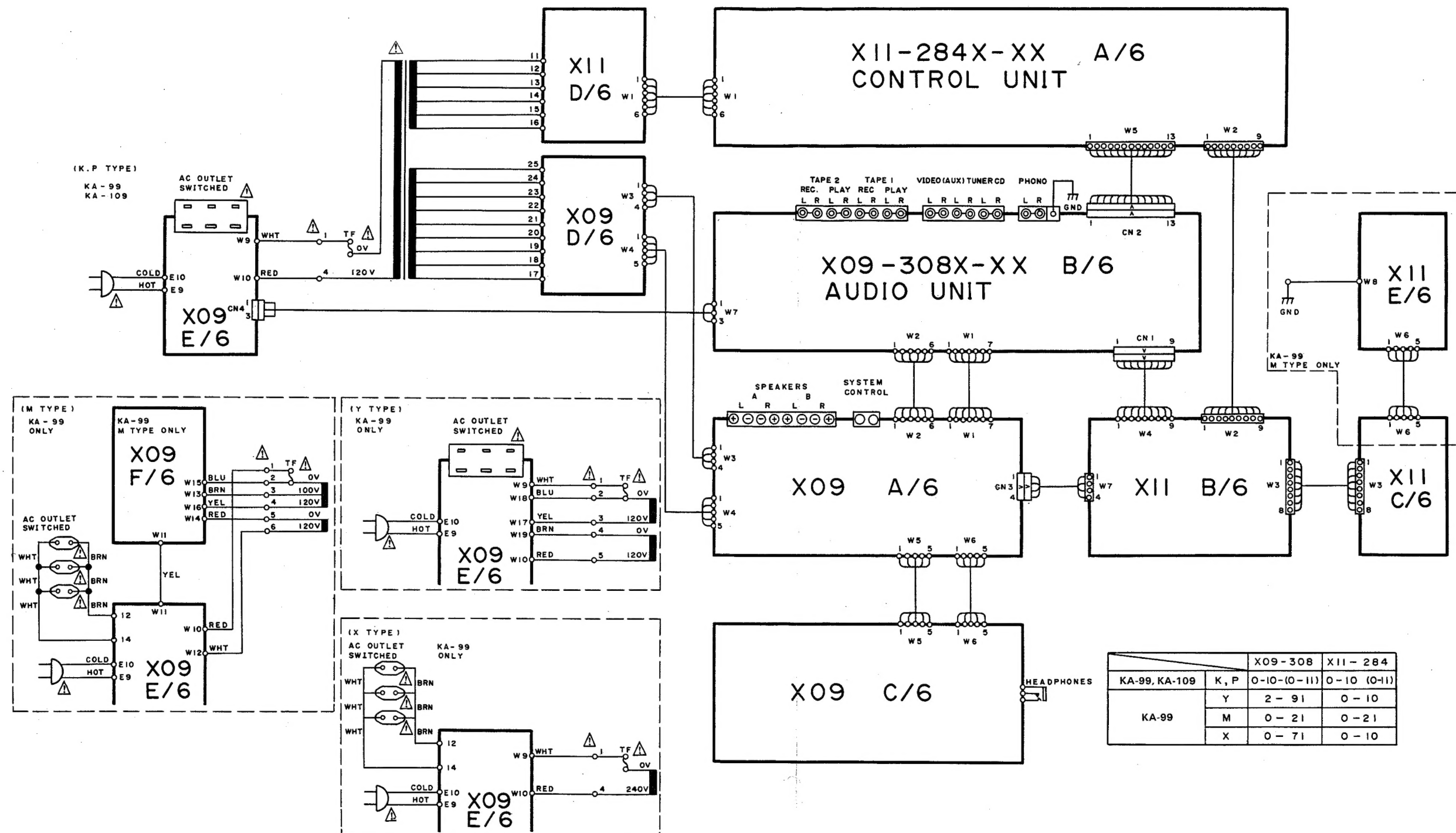
NAME AND OPERATION OF CONTROL

<KA-109>



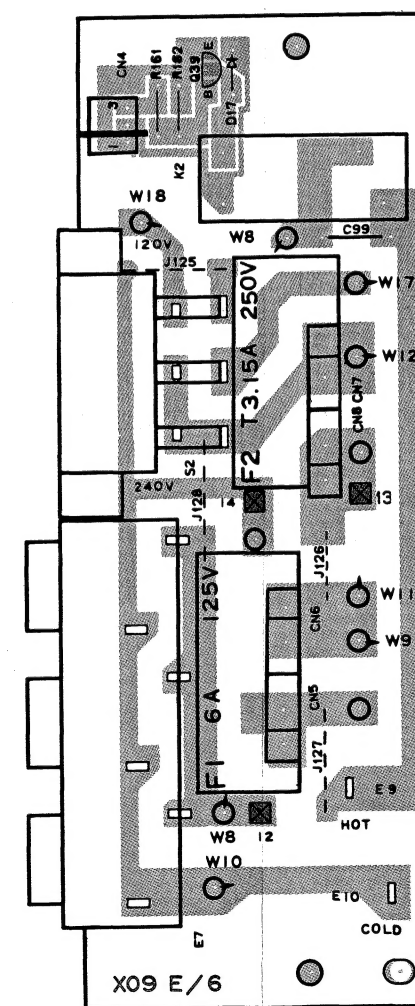
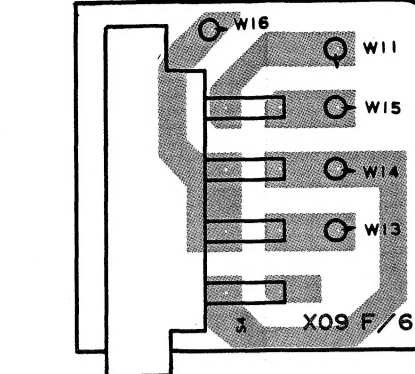
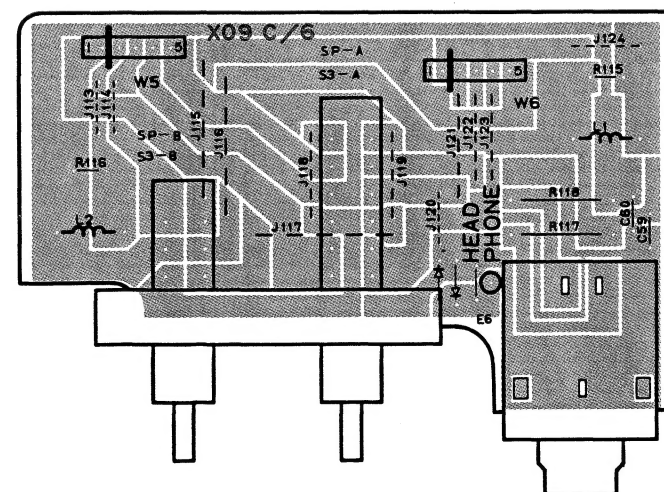
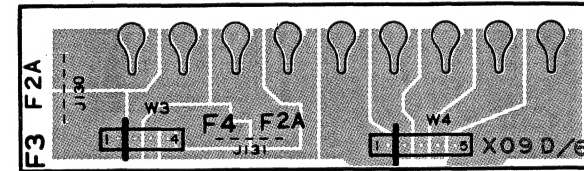
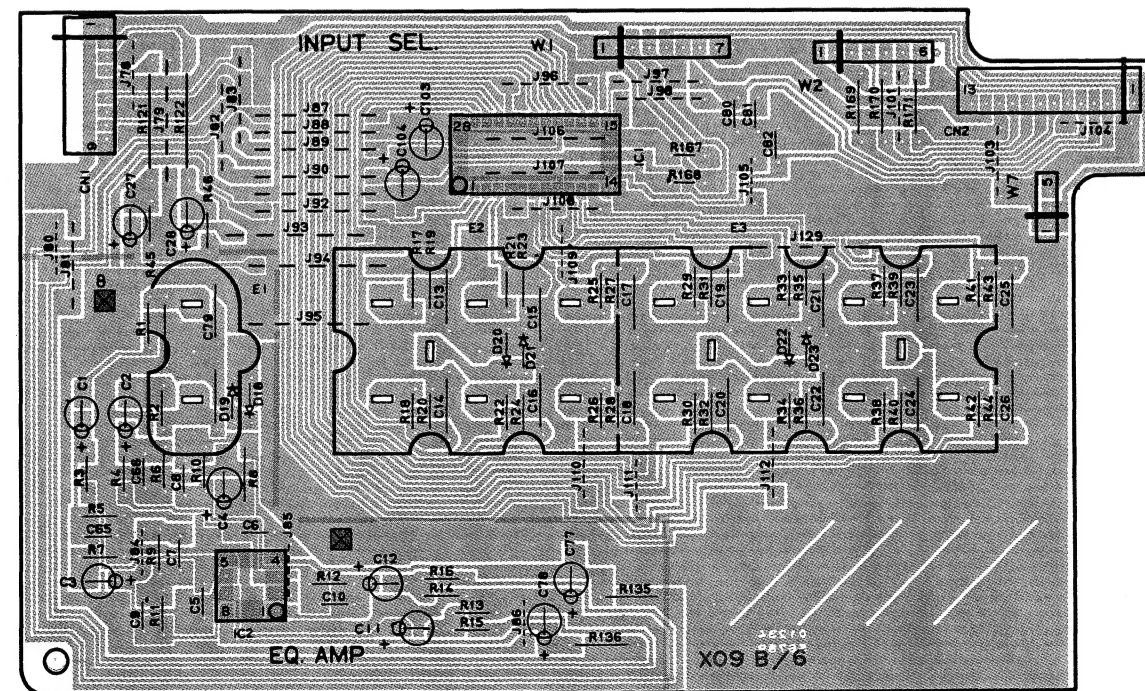
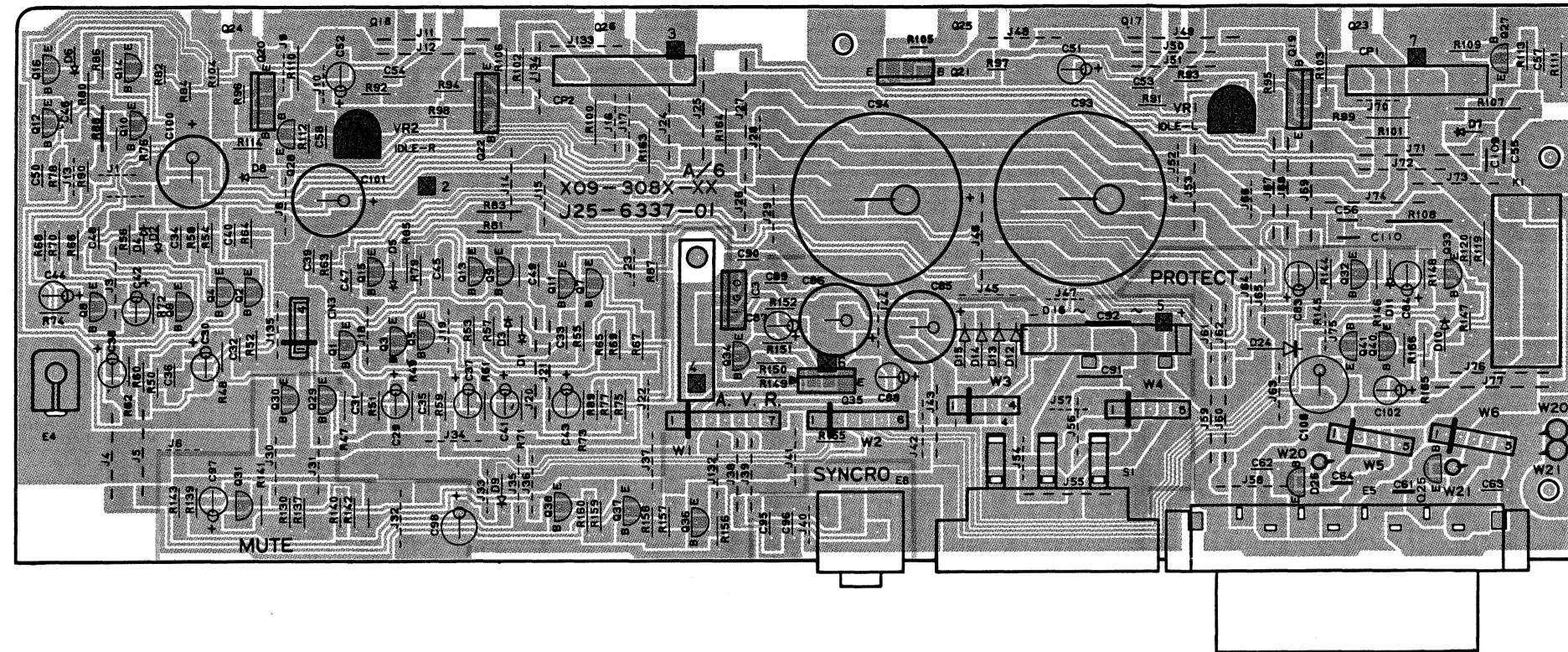
KA-99/KA-109 KA-99/KA-109

WIRING DIAGRAM



PC BOARD (Component Side View)

AUDIO UNIT



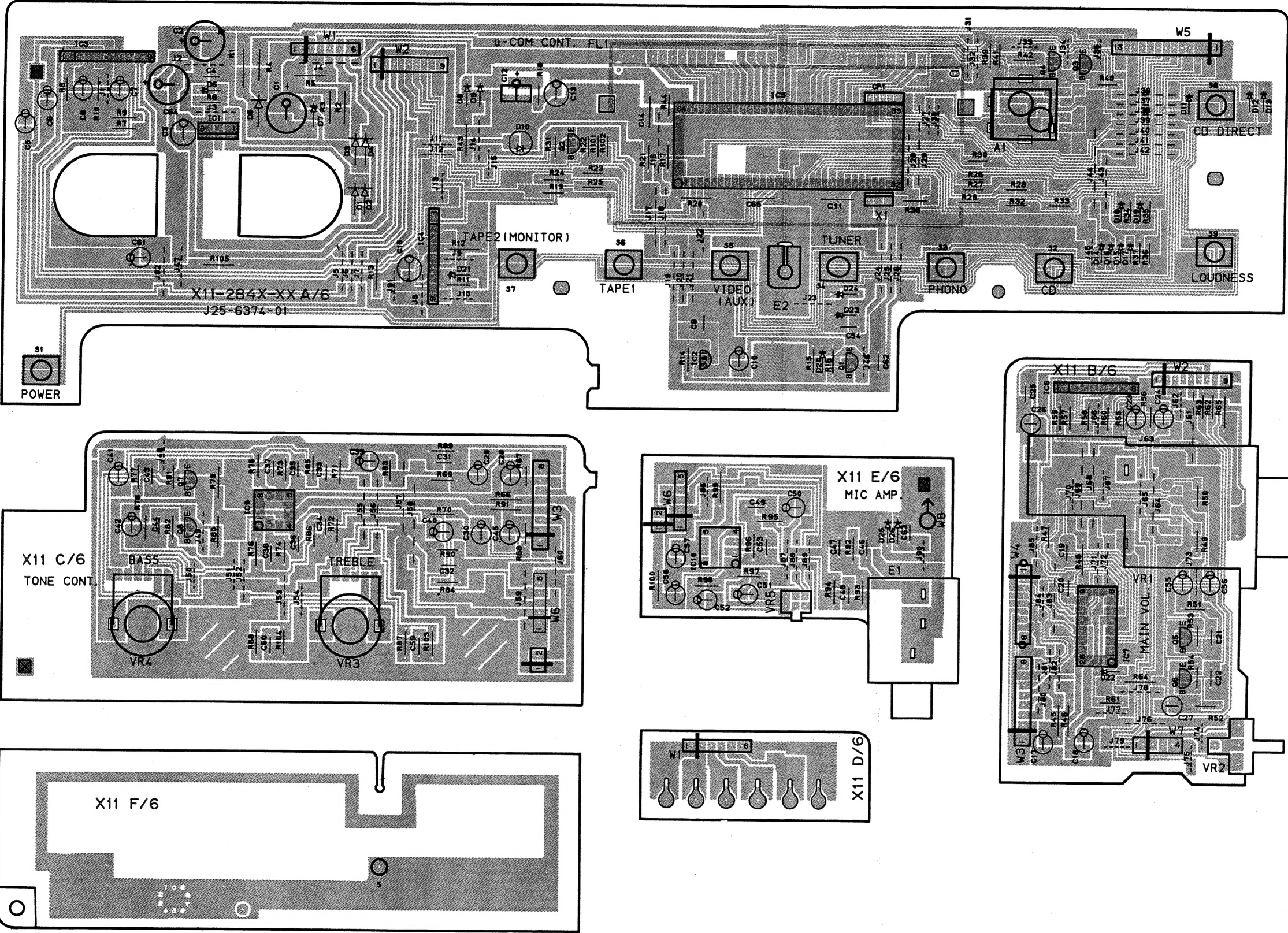
X09-308X-XX

Ref. No.	Q	Address
1	3B	
2	3B	
3	3B	
4	3B	
5	3C	
6	3B	
7	2C	
8	3A	
9	2C	
10	2A	
11	2C	
12	2A	
13	2C	
14	2A	
15	2B	
16	2A	
17		
18		
19	2F	
20	2B	
21	2E	
22	2C	
23		
24		
25	3G	
26	3F	
27	2G	
28	2B	
29	3B	
30	3B	
31	3B	
32	2F	
33	2G	
34	3D	
35	3D	
36	3D	
37	3C	
38	3C	
39	3H	
40	3G	
41	3F	
1	5C	
2	6B	
3	3D	

Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Foil Side View)

CONTROL UNIT



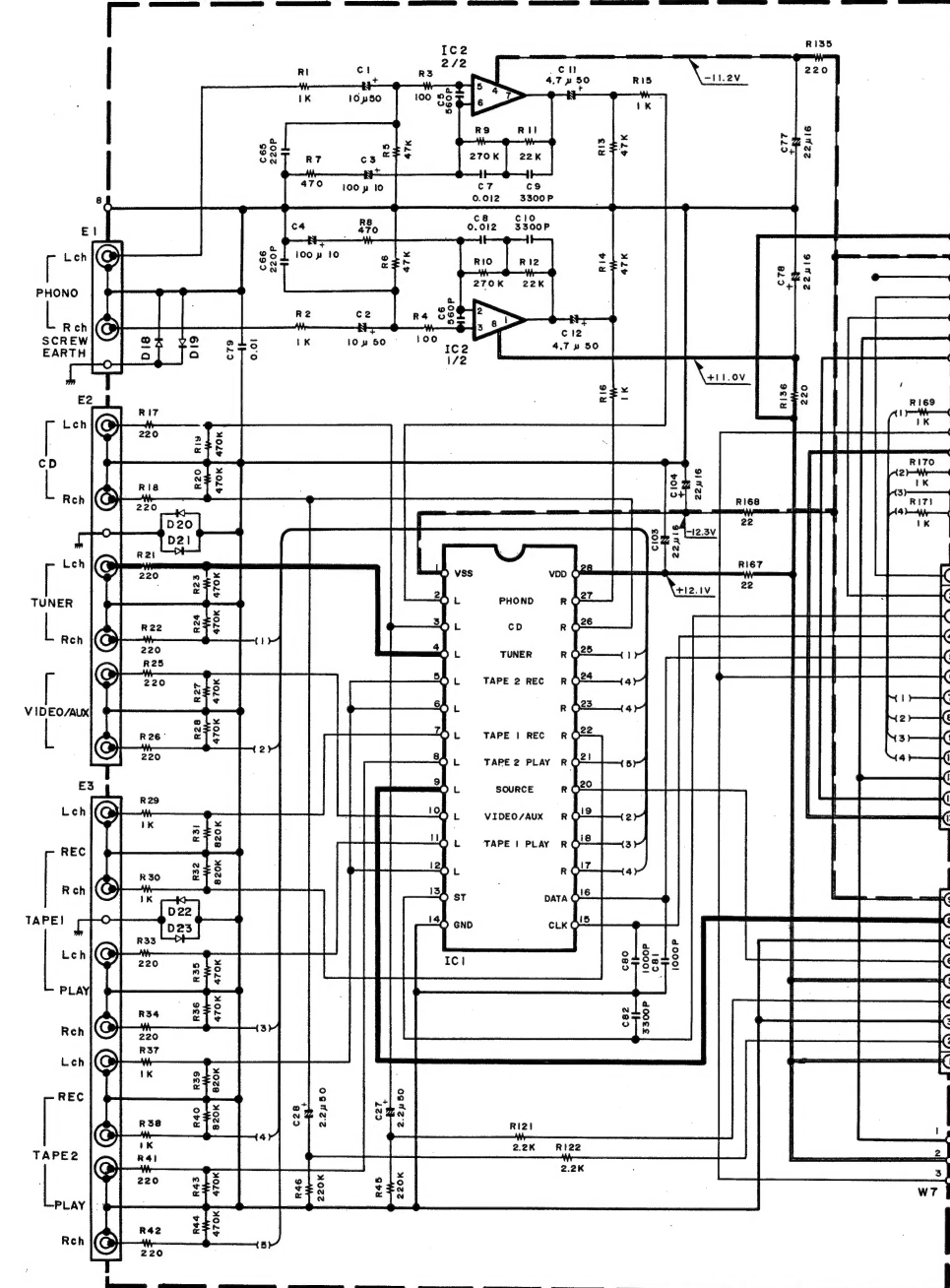
X11-284X-XX

Ref. No.	IC	Q	Address
	1	Q	3P
	2	Q	2N
	3	Q	2R
	4	Q	2Q
	5	Q	5R
	6	Q	5R
	7	Q	4L
	8	Q	4L
1			2L
2			3O
3			2K
4			3N
5			2P
6			3Q
7			5R
9			4M
10			4O

Refer to the schematic diagram for the values of resistors and capacitors.

DESTINATION	R1 NO.	J55.57	J56	J125	J126	W9	W17-19	W11-16	E7	CN7.8	S1	S2	S4	F1	F2
KA-99, KA-109	K, KP	0-10, 0-11	YES	NO	NO	YES	NO	YES	NO	YES	NO	NO	NO	125V	NO
	M	0-21	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES	NO	250V	250V
	X	0-71	NO	YES	NO	YES	NO	YES	NO	NO	YES	NO	NO	250V	250V
	Y	2-91	YES	NO	YES	YES	NO	YES	YES	YES	YES	YES	NO	250V	250V

(X09-308X-XX)(B/6) JAPAN MADE
(X09-3080-11)(B/6) SINGAPORE MADE



(X09-308X-XX)(B/6)
IC1 : TC9163N

D18-23 : 1SS131 or HSS104A

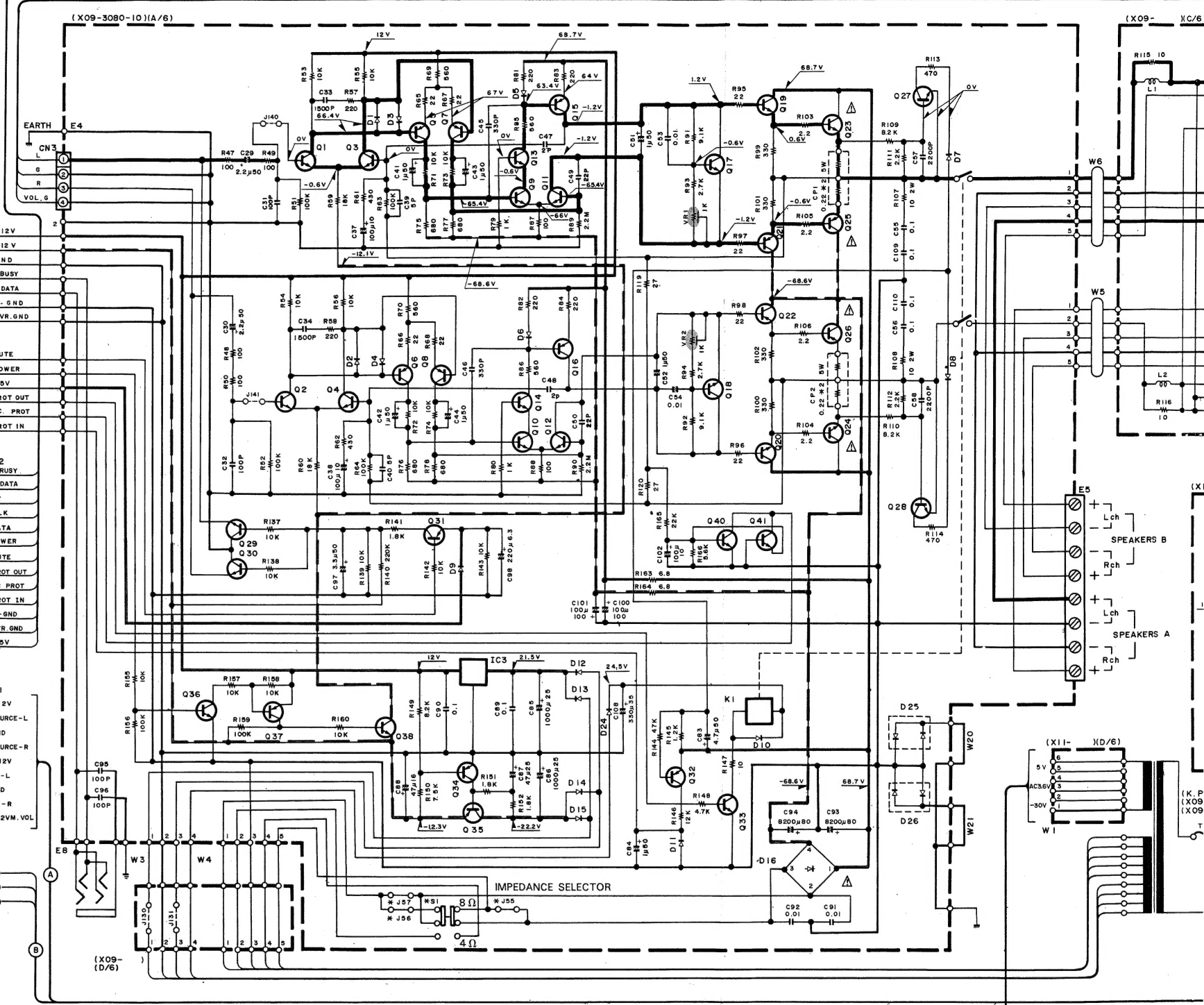
(X09-3080-10)(A/6)

IC2 : UPC4570C-A
IC3 : UPC7812HF
Q1~4 : 2SC1845(F,E)
Q5~8 : 2SA992(F,E)
Q9~14 : 2SC2632(Q,R,S)
Q15,16 : 2SA1124(Q,R,S)

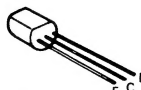
Q17,18 : 2SC4137
Q19,20 : 2SC3944(Q,R,S)
Q21,22 : 2SA1535(Q,R,S)
Q23,24 : 2SC2921
Q25,26 : 2SA1215
Q27,28 : 2SC2631(R,S)
Q29,30 : 2SC2878(B)

Q32 : 2SA1123(R,S)
Q31,34,37 : 2SA733(A)(Q,P) or 2SA933S(Q,R)
Q33 : 2SC2003(L,K)
Q35 : 2SB941
Q36,38,40,41 : 2SC945(A)(Q,P) or 2SC1740S(Q,R)

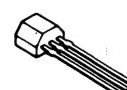
D1~10 : 1SS131 or HSS104A
D11 : RD4.7ES(B) or HZ54.7N(B)
D12~15,24 : S5566B
D16 : RBV-602LFA
D25,26 : MA177



2SA1123
2SA1124
2SA733 (A)
2SA992
2SC1845
2SC2003
2SC2631
2SC2632
2SC2878
2SC945 (A)



2SA933S
2SC1740S



2SA1215
2SC2921



2SC4137



2SA1535
2SB941
2SC3944



TC9215P



TA8409S



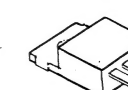
BA6138



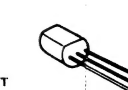
μPC4570C-A



μPC7805H
μPC7812HF



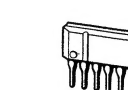
M51951ASL



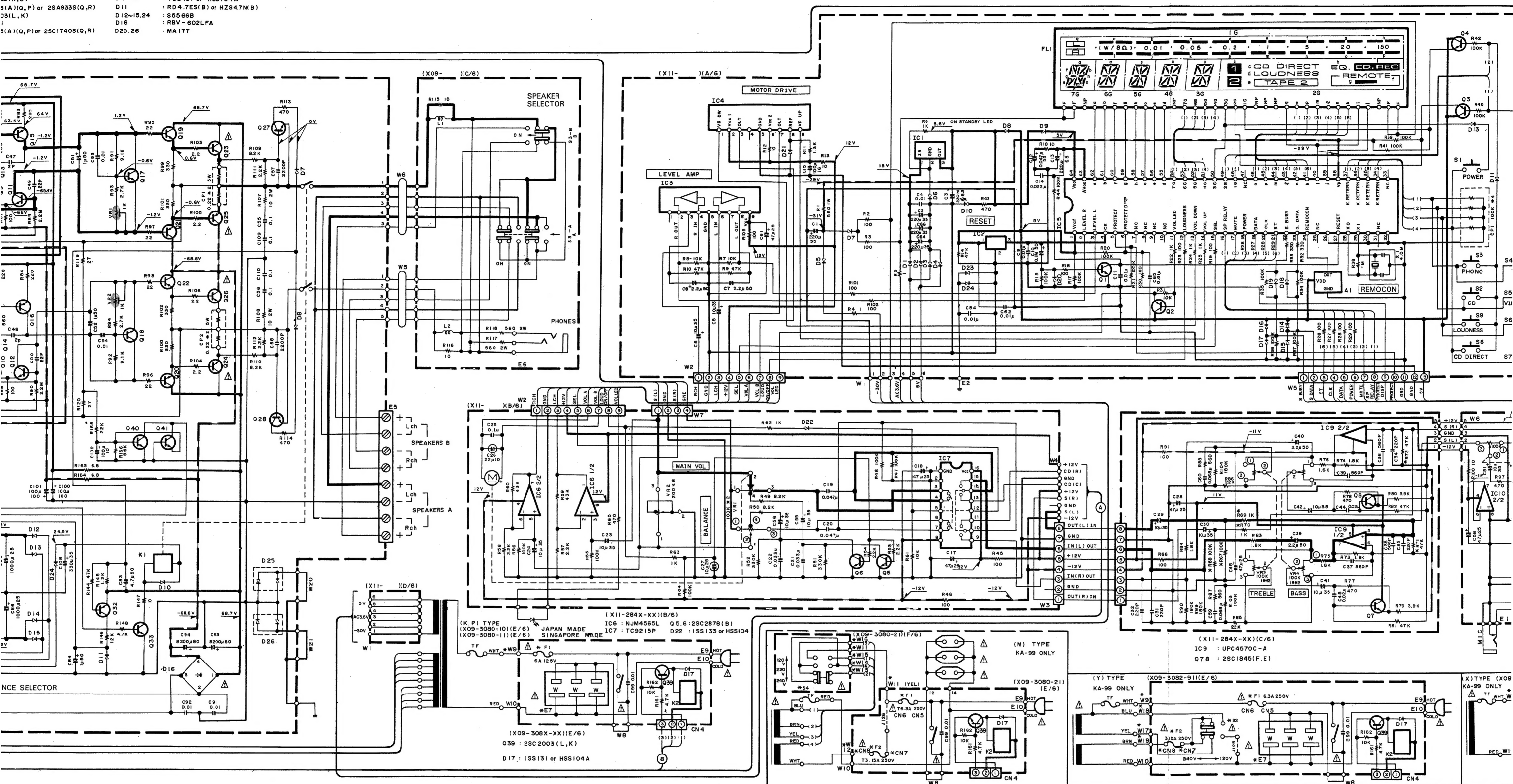
TC9163N



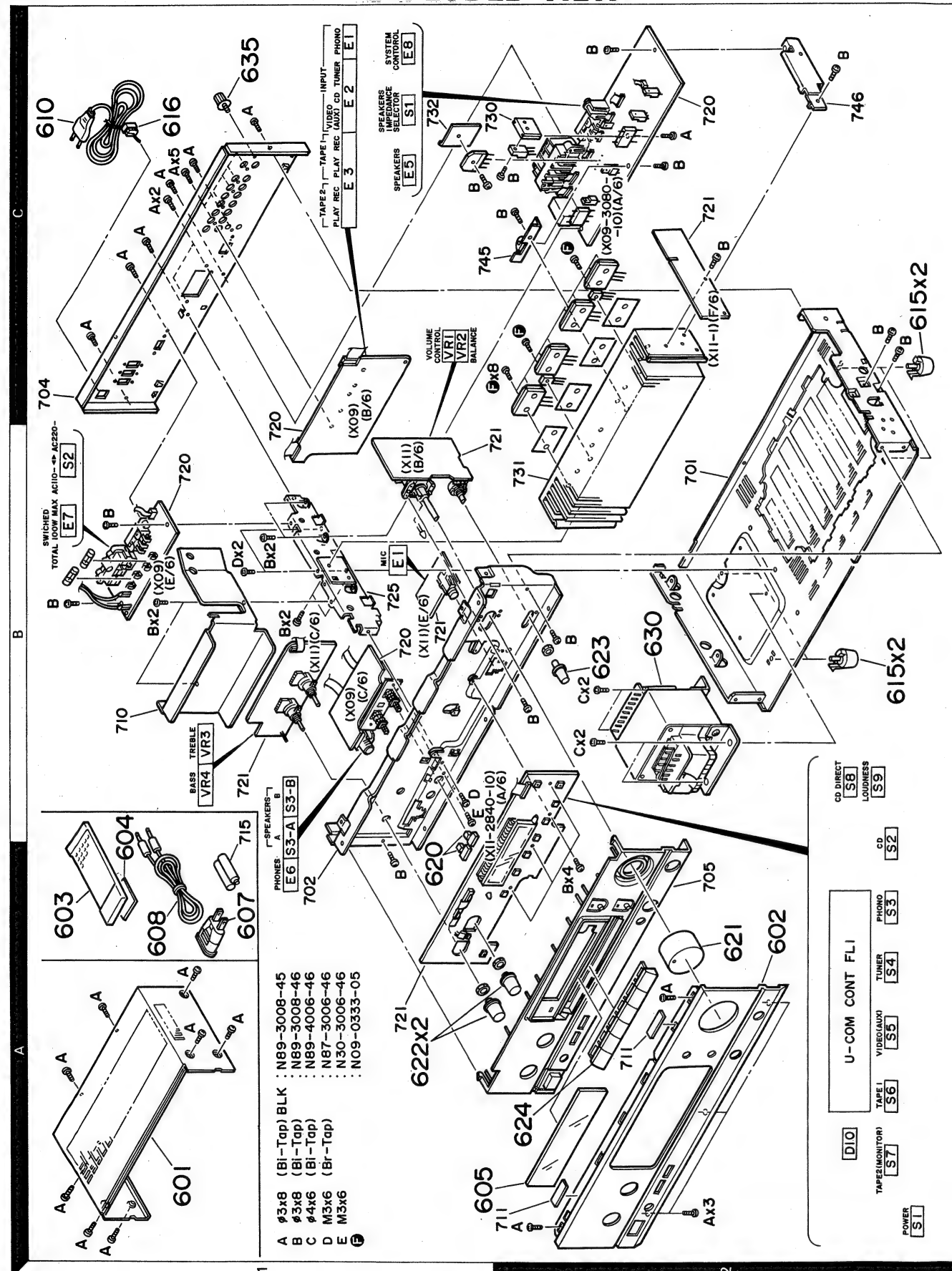
NJM4565L



23(R,S) : ISS131 or HSS104A
 3(A)(Q,P) or 25A9335(Q,R) : RD4.7ES(B) or HZ54.7N(B)
 3(L,K) : S5566B
 D16 : RBV-602LFA
 5(A)(Q,P) or 25C1740S(Q,R) : MA177
 D1~10 : ISS131 or HSS104A
 D11 : RD4.7ES(B) or HZ54.7N(B)
 D12~15,24 : S5566B
 D16 : RBV-602LFA
 D25,26 : MA177



EXPLODED VIEW



PARTS LIST

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向
KA-99 (JAPAN MADE)					
601	1A	*	A01-1834-01	METALLIC CABINET	KPYX M
602	2A	*	A20-6006-02	PANEL	
602	2A	*	A20-6007-02	PANEL	
603	1A, 1B	*	A70-0343-05	REMOTE CONTROLLER ASSY	
604	1A	*	A09-0078-08	BATTERY COVER	
605	2A	*	B10-1078-03	FRONT GLASS	K Y Y X
-	-	-	B46-0092-03	WARRANTY CARD	
-	-	-	B46-0094-03	WARRANTY CARD	
-	-	-	B46-0095-03	WARRANTY CARD	
-	-	-	B46-0096-13	WARRANTY CARD	
-	-	-	B46-0121-03	WARRANTY CARD	P Y
-	-	-	B58-0513-04	CAUTION CARD (PRESET220-240)	
-	-	*	B60-0093-00	INSTRUCTION MANUAL (ENGLISH)	PM M
-	-	*	B60-0094-00	INSTRUCTION MANUAL (FRENCH)	
-	-	*	B60-0095-00	INSTRUCTION MANUAL (SP, AL, CH)	
607	1A	*	E03-0115-05	AC PLUG ADAPTER	M
608	1A, 1B	*	E30-1392-05	CORD WITH PLUG	
610	1C	*	E30-0459-05	AC POWER CORD	M Y KP
610	1C	*	E30-0812-05	AC POWER CORD	
610	1C	*	E30-0974-05	AC POWER CORD	
610	1C	*	E30-1341-05	AC POWER CORD	X M X
E7	1B	*	E03-0055-05	AC OUTLET	
E7	1B	*	E03-0114-05	AC OUTLET	
-	-	*	H01-8749-04	ITEM CARTON CASE	
-	-	*	H10-3971-02	POLYSTYRENE FOAMED FIXTURE	
-	-	*	H10-3972-02	POLYSTYRENE FOAMED FIXTURE	
-	-	*	H25-0223-04	PROTECTION BAG (750X350X0.03)	
-	-	*	H25-0232-04	PROTECTION BAG (235X350X0.03)	
615	2B, 2C	*	J02-1013-05	FOOT	
616	1C	*	J42-0083-05	POWER CORD BUSHING	
-	-	*	J61-0307-05	WIRE BAND	
620	1B	*	K27-2014-04	KNOB (BUTTON) (SPEAKERS)	K P Y M X
621	2A	*	K29-3744-04	KNOB (VOLUME CONTROL)	
622	1A, 2A	*	K29-3909-04	KNOB (BASS, TREBLE)	
623	2B	*	K29-3911-04	KNOB (BALANCE)	
624	2A	*	K29-3914-03	KNOB (INPUT SELECTOR)	
630	2B	*	L07-0054-05	POWER TRANSFORMER	K P Y M X
630	2B	*	L07-0055-05	POWER TRANSFORMER	
630	2B	*	L07-0056-05	POWER TRANSFORMER	
630	2B	*	L07-0057-05	POWER TRANSFORMER	
630	2B	*	L07-0058-05	POWER TRANSFORMER	
635	1C	*	N08-0128-35	BINDING POST (EARTH)	
A	2B	*	N30-3006-46	PAN HEAD MACHINE SCREW	
B	2B, 3C	*	N87-3006-46	BRAZIER HEAD TAPTITE SCREW	
C	1A, 1C	*	N89-3008-45	BINDING HEAD TAPTITE SCREW	
D	1B, 2B	*	N89-3008-46	BINDING HEAD TAPTITE SCREW	
E	2B	*	N89-4006-46	BINDING HEAD TAPTITE SCREW	
KA-99 (SINGAPORE MADE)					
601	1A	*	A01-1834-01	METALLIC CABINET	
602	2A	*	A20-6006-02	PANEL	
603	1A, 1B	*	A70-0343-05	REMOTE CONTROLLER ASSY	
604	1A	*	A09-0078-08	BATTERY COVER	

E: Scandinavia & Europe K: USA

P: Canada

Y: PX (Far East, Hawaii) T: England

M: Other Areas

Y: AAFES (Europe)

X: Australia

J: JAPAN MAD
S: SINGAPORE
A: KA-99
B: KA-109

△ indicates safety critical compo

PARTS LIST

Parts
without Parts No. are not supplied.
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Teile ohne Parts No. werden nicht geliefert.

No.	Address	New Parts	Parts No.	Description	Destination	Remarks
番号	位置	新	部品番号	部品名 / 規格	仕向	備考
KA-99 (JAPAN MADE)						
	1A	*	A01-1834-01	METALLIC CABINET		
	2A	*	A20-6006-02	PANEL	KPYX	
	2A	*	A20-6007-02	PANEL	M	
	1A, 1B	*	A70-0343-05	REMOTE CONTROLLER ASSY		
	1A		A09-0078-08	BATTERY COVER		
	2A	*	B10-1078-03	FRONT GLASS		
			B46-0092-03	WARRANTY CARD	K	
			B46-0094-03	WARRANTY CARD	Y	
			B46-0095-03	WARRANTY CARD	Y	
			B46-0096-13	WARRANTY CARD	X	
			B46-0121-03	WARRANTY CARD	P	
			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
		*	B60-0093-00	INSTRUCTION MANUAL (ENGLISH)		
		*	B60-0094-00	INSTRUCTION MANUAL (FRENCH)	PM	
		*	B60-0095-00	INSTRUCTION MANUAL (SP,AL,CH)	M	
	1A	*	E03-0115-05	AC PLUG ADAPTER	M	
	1A, 1B		E30-1392-05	CORD WITH PLUG		
	1C		E30-0459-05	AC POWER CORD	M	
	1C		E30-0812-05	AC POWER CORD	Y	
	1C		E30-0974-05	AC POWER CORD	KP	
	1C		E30-1341-05	AC POWER CORD	X	
	1B		E03-0055-05	AC OUTLET	M	
	1B	*	E03-0114-05	AC OUTLET	X	
		*	H01-8749-04	ITEM CARTON CASE		
		*	H10-3971-02	POLYSTYRENE FOAMED FIXTURE		
		*	H10-3972-02	POLYSTYRENE FOAMED FIXTURE		
			H25-0223-04	PROTECTION BAG (750X350X0.03)		
			H25-0232-04	PROTECTION BAG (235X350X0.03)		
	2B, 2C		J02-1013-05	FOOT		
	1C		J42-0083-05	POWER CORD BUSHING		
			J61-0307-05	WIRE BAND		
	1B	*	K27-2014-04	KNOB (BUTTON)(SPEAKERS)		
	2A		K29-3744-04	KNOB (VOLUME CONTROL)		
	1A, 2A	*	K29-3909-04	KNOB (BASS, TREBLE)		
	2B	*	K29-3911-04	KNOB (BALANCE)		
	2A	*	K29-3914-03	KNOB (INPUT SELECTOR)		
	2B	*	L07-0054-05	POWER TRANSFORMER	K	
	2B	*	L07-0055-05	POWER TRANSFORMER	P	
	2B	*	L07-0056-05	POWER TRANSFORMER	Y	
	2B	*	L07-0057-05	POWER TRANSFORMER	M	
	2B	*	L07-0058-05	POWER TRANSFORMER	X	
	1C		N08-0128-35	BINDING POST (EARTH)		
	2B		N30-3006-46	PAN HEAD MACHINE SCREW		
	2B, 3C		N87-3006-46	BRAZIER HEAD TAPTITE SCREW		
	1A, 1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
	1B, 2B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
	2B		N89-4006-46	BINDING HEAD TAPTITE SCREW		
KA-99 (SINGAPORE MADE)						
	1A	*	A01-1834-01	METALLIC CABINET		
	2A	*	A20-6006-02	PANEL		
	1A, 1B	*	A70-0343-05	REMOTE CONTROLLER ASSY		
	1A		A09-0078-08	BATTERY COVER		

Scandinavia & Europe K: USA P: Canada
PX(Far East, Hawaii) T: England M: Other Areas
AAFES(Europe) X: Australia

△ indicates safety critical components.

J: JAPAN MADE
S: SINGAPORE MADE
A: KA-99
B: KA-109

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参照番号	位置	新	部品番号	部品名 / 規格	仕向	備考
605	2A	*	B10-1078-03	FRONT GLASS		
-		*	B46-0092-03	WARRANTY CARD		
-		*	B60-0093-00	INSTRUCTION MANUAL (ENGLISH)		
608	1A, 1B		E30-1392-05	CORD WITH PLUG		
610	1C	*	E30-2209-05	AC POWER CORD		
-		*	H01-8793-04	ITEM CARTON CASE		
-		*	H10-5001-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-5002-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
615	2B, 2C		J02-1013-05	FOOT		
616	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
620	1B	*	K27-2014-04	KNOB (BUTTON)(SPEAKERS)		
621	2A		K29-3744-04	KNOB (VOLUME CONTROL)		
622	1A, 2A	*	K29-3909-04	KNOB (BASS, TREBLE)		
623	2B	*	K29-3911-04	KNOB (BALANCE)		
624	2A	*	K29-3914-03	KNOB (INPUT SELECTOR)		
630	2B	*	L07-0054-05	POWER TRANSFORMER		
635	1C		N08-0128-35	BINDING POST (EARTH)		
A	2B		N30-3006-46	PAN HEAD MACHINE SCREW		
B	2B, 3C		N87-3006-46	BRAZIER HEAD TAPTITE SCREW		
C	1A, 1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	1B, 2B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
E	2B		N89-4006-46	BINDING HEAD TAPTITE SCREW		
KA-109 (JAPAN MADE)						
601	1A	*	A01-1834-01	METALLIC CABINET		
602	2A	*	A20-6005-02	PANEL		
603	1A, 1B	*	A70-0342-05	REMOTE CONTROLLER ASSY		
604	1A		A09-0086-08	BATTERY COVER		
605	2A	*	B10-1078-03	FRONT GLASS		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0121-03	WARRANTY CARD	P	
-		*	B60-0091-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B60-0092-00	INSTRUCTION MANUAL (FRENCH)	P	
608	1A, 1B		E30-1392-05	CORD WITH PLUG		
610	1C		E30-0974-05	AC POWER CORD		
612	1A, 1B		G16-0756-08	WRITING SHEET		
-		*	H01-8748-04	ITEM CARTON CASE		
-		*	H10-3992-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-3993-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
615	2B, 2C		J02-1013-05	FOOT		
616	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
620	1B	*	K27-2014-04	KNOB (BUTTON)(SPEAKERS)		
621	2A		K29-3744-04	KNOB (VOLUME CONTROL)		
622	1A, 2A	*	K29-3909-04	KNOB (BASS, TREBLE)		
623	2B	*	K29-3911-04	KNOB (BALANCE)		
624	2A	*	K29-3914-03	KNOB (INPUT SELECTOR)		

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Ref. No.	Address
参照番号	位置
630	2B
630	2B
635	1C
A	2B
B	2B, 2
C	1A, 1
D	1B, 2
E	2B
601	1A
602	2A
603	1A, 1
604	1A
605	2A
-	
-	
608	1A, 1
610	1C
612	1A, 1
-	
-	
-	
-	
615	2B, 2
616	1C
-	
620	1B
621	2A
622	1A, 2
623	2B
624	2A
630	2B
635	1C
A	2B
B	2B, 2
C	1A, 1
D	1B, 2
E	2B
C1	, 2
C1	, 2
C3	, 4
C3	, 4
C5	, 6
C7	, 8
C9	, 10
C11	, 12
C11	, 12
C27	-30

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605 - -	2A	*	B10-1078-03 B46-0092-03 B60-0093-00	FRONT GLASS WARRANTY CARD INSTRUCTION MANUAL (ENGLISH)		
608 610 - - - -	1A, 1B 1C	*	E30-1392-05 E30-2209-05 H01-8793-04 H10-5001-02 H10-5002-02 H25-0223-04 H25-0232-04	CORD WITH PLUG AC POWER CORD ITEM CARTON CASE POLYSTYRENE FOAMED FIXTURE POLYSTYRENE FOAMED FIXTURE PROTECTION BAG (750X350X0.03) PROTECTION BAG (235X350X0.03)		
615 616 -	2B, 2C 1C		J02-1013-05 J42-0083-05 J61-0307-05	FOOT POWER CORD BUSHING WIRE BAND		
620 621 622 623 624	1B 2A 1A, 2A 2B 2A	*	K27-2014-04 K29-3744-04 K29-3909-04 K29-3911-04 K29-3914-03	KNOB (BUTTON) (SPEAKERS) KNOB (VOLUME CONTROL) KNOB (BASS, TREBLE) KNOB (BALANCE) KNOB (INPUT SELECTOR)		
630 635 A B C D E	2B 1C 2B 2B, 3C 1A, 1C 1B, 2B 2B	*	L07-0054-05 N08-0128-35 N30-3006-46 N87-3006-46 N89-3008-45 N89-3008-46 N89-4006-46	POWER TRANSFORMER BINDING POST (EARTH) PAN HEAD MACHINE SCREW BRAZIER HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW		
KA-109 (JAPAN MADE)						
601 602 603 604 605 - - - -	1A 2A 1A, 1B 1A 2A	*	A01-1834-01 A20-6005-02 A70-0342-05 A09-0086-08 B10-1078-03 B46-0092-03 B46-0121-03 B60-0091-00 B60-0092-00	METALLIC CABINET PANEL REMOTE CONTROLLER ASSY BATTERY COVER FRONT GLASS WARRANTY CARD WARRANTY CARD INSTRUCTION MANUAL (ENGLISH) INSTRUCTION MANUAL (FRENCH)	K P P	
608 610 612 - - - -	1A, 1B 1C 1A, 1B		E30-1392-05 E30-0974-05 G16-0756-08 H01-8748-04 H10-3992-02 H10-3993-02 H25-0223-04 H25-0232-04	CORD WITH PLUG AC POWER CORD WRITING SHEET ITEM CARTON CASE POLYSTYRENE FOAMED FIXTURE POLYSTYRENE FOAMED FIXTURE PROTECTION BAG (750X350X0.03) PROTECTION BAG (235X350X0.03)		
615 616 -	2B, 2C 1C		J02-1013-05 J42-0083-05 J61-0307-05	FOOT POWER CORD BUSHING WIRE BAND		
620 621 622 623 624	1B 2A 1A, 2A 2B 2A	*	K27-2014-04 K29-3744-04 K29-3909-04 K29-3911-04 K29-3914-03	KNOB (BUTTON) (SPEAKERS) KNOB (VOLUME CONTROL) KNOB (BASS, TREBLE) KNOB (BALANCE) KNOB (INPUT SELECTOR)		

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630 630 635 A B C D E	2B 2B 1C 2B 2B, 2C 1A, 1C 1B, 2B 2B	*	L07-0054-05 L07-0055-05 N08-0128-35 N30-3006-46 N87-3006-46 N89-3008-45 N89-3008-46 N89-4006-46	POWER TRANSFORMER POWER TRANSFORMER BINDING POST (EARTH) PAN HEAD MACHINE SCREW BRAZIER HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW	K P	
KA-109 (SINGAPORE MADE)						
601 602 603 604 605 - - - -	1A 2A 1A, 1B 1A 2A	*	A01-1834-01 A20-6005-02 A70-0342-05 A09-0086-08 B10-1078-03 B46-0092-03 B60-0091-00	METALLIC CABINET PANEL REMOTE CONTROLLER ASSY BATTERY COVER FRONT GLASS WARRANTY CARD INSTRUCTION MANUAL (ENGLISH)		
608 610 612 - - - -	1A, 1B 1C 1A, 1B		E30-1392-05 E30-2209-05 G16-0756-08 H01-8792-04 H10-3994-02 H10-3995-02 H25-0223-04 H25-0232-04	CORD WITH PLUG AC POWER CORD WRITING SHEET ITEM CARTON CASE POLYSTYRENE FOAMED FIXTURE POLYSTYRENE FOAMED FIXTURE PROTECTION BAG (750X350X0.03) PROTECTION BAG (235X350X0.03)		
615 616 -	2B, 2C 1C		J02-1013-05 J42-0083-05 J61-0307-05	FOOT POWER CORD BUSHING WIRE BAND		
620 621 622 623 624	1B 2A 1A, 2A 2B 2A	*	K27-2014-04 K29-3744-04 K29-3909-04 K29-3911-04 K29-3914-03	KNOB (BUTTON) (SPEAKERS) KNOB (VOLUME CONTROL) KNOB (BASS, TREBLE) KNOB (BALANCE) KNOB (INPUT SELECTOR)		
630 635 A B C D E	2B 1C 2B 2B, 3C 1A, 1C 1B, 2B 2B	*	L07-0054-05 N08-0128-35 N30-3006-46 N87-3006-46 N89-3008-45 N89-3008-46 N89-4006-46	POWER TRANSFORMER BINDING POST (EARTH) PAN HEAD MACHINE SCREW BRAZIER HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW		
AUDIO UNIT (X09-308X-XX)						
C1 C1 C3 C3 C5	,2 ,2 ,4 ,4 ,6		CE04KW1H100M CE04LW1H100M CE04KW1A101M CE04LW1A101M CK45FB1H561K	ELECTRO 10UF 50WV ELECTRO 10UF 50WV ELECTRO 100UF 10WV ELECTRO 100UF 10WV CERAMIC 560PF K		J S J S
C7 C9 C11 C11 C27	,8 ,10 ,12 ,12 -30		CF92FV1H123J CF92FV1H332J CE04KW1H4R7M CE04LW1H4R7M CE04KW1H2R2M	MF 0.012UF J MF 3300PF J ELECTRO 4.7UF 50WV ELECTRO 4.7UF 50WV ELECTRO 2.2UF 50WV		J S J

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C27 -30			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		S
C31 ,32			CC45FSL1H221J	CERAMIC 220PF J		
C33 ,34			CF92FV1H152J	MF 1500PF J		
C37 ,38			CE04KW1A101M	ELECTRO 100UF 10WV		J
C37 ,38			CE04LW1A101M	ELECTRO 100UF 10WV		S
C39 ,40			CC45FSL1H050C	CERAMIC 5.0PF C		
C41 -44			CE04KW1H010M	ELECTRO 1.0UF 50WV		J
C41 -44			CE04LW1H010M	ELECTRO 1.0UF 50WV		S
C45 ,46			CC45FSL1H331J	CERAMIC 330PF J		
C47 ,48			CC45FSL1H020C	CERAMIC 2.0PF C		
C49 ,50			CC45FSL1H220J	CERAMIC 22PF J		
C51 ,52			CE04KW1H010M	ELECTRO 1.0UF 50WV		J
C51 ,52			CE04LW1H010M	ELECTRO 1.0UF 50WV		S
C53 ,54			CK45FF1H103Z	CERAMIC 0.010UF Z		
C55 ,56			CF92FV1H104J	MF 0.10UF J		
C57 ,58			CF92FV1H222J	MF 2200PF J		
C65 ,66			CC45FSL1H221J	CERAMIC 220PF J		
C77 ,78			CE04KW1C220M	ELECTRO 22UF 16WV		J
C77 ,78			CE04LW1C220M	ELECTRO 22UF 16WV		S
C79			C91-0769-05	CERAMIC 0.01UF M		
C80 ,81			CK45FB1H102K	CERAMIC 1000PF K		
C82			CK45FB1H332K	CERAMIC 3300PF K		
C83			CE04KW1H4R7M	ELECTRO 4.7UF 50WV		J
C83			CE04LW1H4R7M	ELECTRO 4.7UF 50WV		S
C84			CE04KW1H010M	ELECTRO 1.0UF 50WV		J
C84			CE04LW1H010M	ELECTRO 1.0UF 50WV		S
C85 ,86			CE04KW1E102M	ELECTRO 1000UF 25WV		J
C85 ,86			CE04LW1E102M	ELECTRO 1000UF 25WV		S
C87			CE04KW1E470M	ELECTRO 47UF 25WV		J
C87			CE04LW1E470M	ELECTRO 47UF 25WV		S
C88			CE04KW1C470M	ELECTRO 47UF 16WV		J
C88			CE04LW1C470M	ELECTRO 47UF 16WV		S
C89 ,90			CF92FV1H104J	MF 0.10UF J		
C91 ,92			CK45FE2H103P	CERAMIC 0.010UF P		
C93 ,94			C90-1645-05	ELECTRO 8200UF 80WV		
C95 ,96			CC45FSL1H101J	CERAMIC 100PF J		
C97			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		J
C97			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		S
C98			CE04KW0J221M	ELECTRO 220UF 6.3WV		J
C98			CE04LW0J221M	ELECTRO 220UF 6.3WV		S
C99			C91-0647-05	CERAMIC 0.01UF P		
C100,101			CE04KW2A101M	ELECTRO 100UF 100WV		J
C102			CE04KW1A101M	ELECTRO 100UF 10WV		S
C102			CE04LW1A101M	ELECTRO 100UF 10WV		S
C103,104			CE04KW1C220M	ELECTRO 22UF 16WV		J
C103,104			CE04LW1C220M	ELECTRO 22UF 16WV		S
C108			CE04KW1V331M	ELECTRO 330UF 35WV		J
C108			CE04LW1V331M	ELECTRO 330UF 35WV		S
C109,110			CF92FV1H104J	MF 0.10UF J		
E1		*	E13-0259-05	PHONE JACK (2P)(PHONE)		
E2		*	E13-0637-05	PHONE JACK (6P)(CD, TUNER, AUX)		
E3			E13-0826-05	PHONE JACK (TAPE)		
E5			E20-0823-05	TERMINAL BOARD(8P)(SPEAKER)		
E6			E11-0162-05	PHONE JACK (3P)(PHONES)		

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E7			E03-0093-05	AC OUTLET	KPY	A
E7			E03-0093-05	AC OUTLET		B
E8			E11-0188-05	PHONE JACK(SYSTEM CONTROL)		
F1			F05-3121-05	FUSE (SEMKO) (250V T3.15A)	X	A
F1			F05-6029-05	FUSE (UL)	KP	A
F1			F05-6029-05	FUSE (UL)		B
F1			F05-6321-05	FUSE (SEMKO) (250V T6.3A)	M	A
F1			F05-6324-05	FUSE (250V 6.3A)	Y	A
F2			F05-3121-05	FUSE (SEMKO) (250V T3.15A)	M	A
F2			F05-3123-05	FUSE (250V 3.15A)	Y	A
CN5 -8		*	J13-0075-05	FUSE CLIP	YM	A
CN5 ,6		*	J13-0075-05	FUSE CLIP	KPX	A
CN5 ,6		*	J13-0075-05	FUSE CLIP		B
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
C	2C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	2C		N89-3008-46	BINDING HEAD TAPTITE SCREW		
F	2C		N09-0333-05	TAPPING SCREW (3X12)		
G	2C		N35-3008-46	BINDING HEAD MACHINE SCREW		
CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R81			RD14GB2E221J	FL-PROOF RD 220 J 1/4W		
R82			RD14NB2E221J	RD 220 J 1/4W		
R83			RD14GB2E221J	FL-PROOF RD 220 J 1/4W		
R84			RD14NB2E221J	RD 220 J 1/4W		
R87			RD14NB2E101J	RD 100 J 1/4W		
R88			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R95 -98		*	RD14NB2E220J	RD 22 J 1/4W		
R99 -101			RD14AB2E331J	FL-PROOF RD 330 J 1/4W		J
R99 -102			RD14GB2E331J	FL-PROOF RD 330 J 1/4W		S
R102			RD14GB2E331J	FL-PROOF RD 330 J 1/4W		J
R103			RD14AB2E2R2J	FL-PROOF RD 2.2 J 1/4W		J
R103			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		S
R104,105		*	RD14NB2E2R2J	RD 2.2 J 1/4W		
R106			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R107,108			RS14DB3D100J	FL-PROOF RS 10 J 2W		J
R107,108			RS14KB3D100J	FL-PROOF RS 10 J 2W		S
R115,116			RD14NB2E100J	RD 10 J 1/4W		
R117,118			RS14DB3D561J	FL-PROOF RS 560 J 2W		J
R117,118			RS14KB3D561J	FL-PROOF RS 560 J 2W		S
R147			RD14NB2E100J	RD 10 J 1/4W		
R163,164			RD14AB2E6R8J	FL-PROOF RD 6.8 J 1/4W		J
R163,164			RD14GB2E6R8J	FL-PROOF RD 6.8 J 1/4W		S
R167,168		*	RD14NB2E220J	RD 22 J 1/4W		
VR1 ,2			R12-1083-05	TRIM POT. 1K		
K1			S51-2092-05	MAGNETIC RELAY		
K2			S51-1052-05	MAGNETIC RELAY		
S1			S31-2136-05	SLIDE SWITCH (POWER TYPE)	YMX	A
S2			S31-2131-05	SLIDE SWITCH (POWER TYPE)	Y	A
S3			S42-2163-05	MULTIPLE PUSH SWITCH		
S4		*	S31-2322-05	SLIDE SWITCH	M	A
D1 -10			HSS104A	DIODE		
D1 -10			1SS131	DIODE		
D11			HZS4.7N(B)	ZENER DIODE		

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D11			RD4.7BS(B)	ZENER DIODE		
D12 -15			S5566B	DIODE		
D16			RBV-602LFA	DIODE		
D17 -23			HSS104A	DIODE		
D17 -23			1SS131	DIODE		
D24			S5566B	DIODE		
D25 ,26			MA177	DIODE		
IC1			TC9163N	IC(BILATERAL SWITCH X16)		
IC2			UPC4570C-A	IC(OP AMP X2)		
IC3			UPC7812HF	IC(VOLTAGE REGULATOR/ +12V)		
Q1 -4			2SC1845(F,B)	TRANSISTOR		
Q5 -8			2SA992(F,B)	TRANSISTOR		
Q9 -14			2SC2632(Q,R,S)	TRANSISTOR		
Q15 ,16			2SA1124(Q,R,S)	TRANSISTOR		
Q17 ,18			2SC4137	TRANSISTOR		
Q19 ,20			2SC3944(Q,R,S)	TRANSISTOR		
Q21 ,22			2SA1535(Q,R,S)	TRANSISTOR		
Q23 ,24			2SC2921	TRANSISTOR		
Q25 ,26			2SA1215	TRANSISTOR		
Q27 ,28			2SC2631(R,S)	TRANSISTOR		
Q29 ,30			2SC2878(B)	TRANSISTOR		
Q31			2SA733(A)(Q,P)	TRANSISTOR		
Q31			2SA933S(Q,R)	TRANSISTOR		
Q32			2SA1123(R,S)	TRANSISTOR		
Q33			2SC2003(L,K)	TRANSISTOR		
Q34			2SA733(A)(Q,P)	TRANSISTOR		
Q34			2SA933S(Q,R)	TRANSISTOR		
Q35			2SB941	TRANSISTOR		
Q36			2SC1740S(Q,R)	TRANSISTOR		
Q36			2SC945(A)(Q,P)	TRANSISTOR		
Q37			2SA733(A)(Q,P)	TRANSISTOR		
Q37			2SA933S(Q,R)	TRANSISTOR		
Q38			2SC1740S(Q,R)	TRANSISTOR		
Q38			2SC945(A)(Q,P)	TRANSISTOR		
Q39			2SC2003(L,K)	TRANSISTOR		
Q40 ,41			2SC1740S(Q,R)	TRANSISTOR		
Q40 ,41			2SC945(A)(Q,P)	TRANSISTOR		

CONTROL UNIT (X11-284X-XX)

D10		*	B30-1291-05	LED		
C1 ,2			CE04DW1V221M	ELECTRO	220UF	35WV
C3			CE04KW0J221M	ELECTRO	220UF	6.3WV
C3			CE04LW0J221M	ELECTRO	220UF	6.3WV
C4			CF92FV1H103J	MF	0.010UF	J
C5 ,6			CE04KW1V100M	ELECTRO	10UF	35WV
C5 ,6			CE04LW1V100M	ELECTRO	10UF	35WV
C7 ,8			CE04KW1H2R2M	ELECTRO	2.2UF	50WV
C7 ,8			CE04LW1H2R2M	ELECTRO	2.2UF	50WV
C9			CK45FF1H103Z	CERAMIC	0.010UF	Z
C10			CE04KW1HOR1M	ELECTRO	0.1UF	50WV
C10			CE04LW1HOR1M	ELECTRO	0.1UF	50WV
C11			C91-0769-05	CERAMIC	0.01UF	M
C12			C91-0928-05	BACKUP C	0.047F	5.5WV
C13			CE04KW0J221M	ELECTRO	220UF	6.3WV
C13			CE04LW0J221M	ELECTRO	220UF	6.3WV

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Ref. No. 参照番号	Address 位置	New Parts	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向	Re- marks 備考
C14			C91-0085-05	CERAMIC	0.022UF	N
C15			CE04KW1C101M	ELECTRO	100UF	16WV
C15			CE04LW1C101M	ELECTRO	100UF	16WV
C17 ,18			CE04KW1E470M	ELECTRO	47UF	25WV
C17 ,18			CE04LW1E470M	ELECTRO	47UF	25WV
C19 ,20			CF92FV1H473J	MF	0.047UF	J
C21 ,22			CF92FV1H333J	MF	0.033UF	J
C23 ,24			CE04KW1V100M	ELECTRO	10UF	35WV
C23 ,24			CE04LW1V100M	ELECTRO	10UF	35WV
C25			CF92FV1H104J	MF	0.10UF	J
C26			C90-1333-05	NP-ELEC	22UF	10WV
C27			C90-1353-05	NP-ELEC	10UF	25WV
C28			CE04KW1E470M	ELECTRO	47UF	25WV
C28			CE04LW1E470M	ELECTRO	47UF	25WV
C29 ,30			CE04KW1V100M	ELECTRO	10UF	35WV
C29 ,30			CE04LW1V100M	ELECTRO	10UF	35WV
C31 -34			CC45FSL1H221J	CERAMIC	220PF	J
C35 -38			CK45FB1H561K	CERAMIC	560PF	K
C39 ,40			CE04KW1H2R2M	ELECTRO	2.2UF	50WV
C39 ,40			CE04LW1H2R2M	ELECTRO	2.2UF	50WV
C41 ,42			CE04KW1V100M	ELECTRO	10UF	35WV
C41 ,42			CE04LW1V100M	ELECTRO	10UF	35WV
C43 ,44			CF92FV1H203J	MF	0.020UF	J
C45			CE04KW1E470M	ELECTRO	47UF	25WV
C45			CE04LW1E470M	ELECTRO	47UF	25WV
C46			CK45FF1H472Z	CERAMIC	4700PF	Z
C47			CC45FSL1H221J	CERAMIC	220PF	J
C48			CF92FV1H473J	MF	0.047UF	J
C49			CC45FSL1H221J	CERAMIC	220PF	J
C50 -52			CE04KW1V100M	ELECTRO	10UF	35WV
C53			CF92FV1H102J	MF	1000PF	J
C54			CK45FF1H103Z	CERAMIC	0.010UF	Z
C55 ,56			CE04KW1V100M	ELECTRO	10UF	35WV
C55 ,56			CE04LW1V100M	ELECTRO	10UF	35WV
C57 ,58			CE04KW1E470M	ELECTRO	47UF	25WV
C59 ,60			CF92FV1H683J	MF	0.068UF	J
C61			CE04KW1E470M	ELECTRO	47UF	25WV
C61			CE04LW1E470M	ELECTRO	47UF	25WV
C62			CK45FF1H103Z	CERAMIC	0.010UF	Z
C62			CK45FF1H103Z	CERAMIC	0.010UF	Z
C62 ,63			CK45FF1H103Z	CERAMIC	0.010UF	Z
C64			CE04DW1V221M	ELECTRO	220UF	35WV
C65			C91-0769-05	CERAMIC	0.01UF	M
C66			CE04DW1V221M	ELECTRO	220UF	35WV
E1			E11-0159-05	PHONE JACK(3P)(MIC JACK)		
X1			L78-0244-05	RESONATOR	4.0MHz	
CP1			R90-0482-05	MULTI-COMP	100KX4	J 1/6W
R1			RS14KB3A561J	FL-PROOF RS	560	J 1W
R2 ,3			RD14NB2E101J	RD	100	J 1/4W
R4 ,5			RD14NB2E1R0J	RD	1.0	J 1/4W
VR1		*	R29-5037-05	POTENTIOMETER(100KX2)(MAIN VR)		
VR2		*	R01-5072-05	POTENTIOMETER(200K) (BALANCE)		
VR3 ,4		*	R06-3068-05	POTENTIOMETER(100KX2)(BAS,TRE)		

E: Scandinavia & Europe K: USA P: Canada
Y: PX(Far East, Hawaii) T: England M: Other Areas
Y: AAFES(Europe) X: Australia

J: JAPAN MADE
S: SINGAPORE MADE
A: KA-99
B: KA-109

△ indicates safety critical components.

PARTS LIST

SPECIFICATIONS

* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向	Re- marks 備考
VR5		*	R10-5037-05	POTENTIOMETER(100KX2)(MIC MIX)	M	A
S1 -9			S40-1064-05	PUSH SWITCH		
D1 -5			S5566B	DIODE		
D6			HSS104	DIODE		
D6			1SS133	DIODE		
D7			HZS5.6N(B2)	ZENER DIODE		
D7			RD5.6ES(B2)	ZENER DIODE		
D8 ,9			HSS104	DIODE		
D8 ,9			1SS133	DIODE		
D11 -20			HSS104	DIODE		
D11 -20			1SS133	DIODE		
D21			HZS3.9N(B2)	ZENER DIODE		
D21			RD3.9ES(B2)	ZENER DIODE		
D22 -24			HSS104	DIODE	KPYX	A
D22 -24			HSS104	DIODE		B
D22 -24			1SS133	DIODE	KPYX	A
D22 -24			1SS133	DIODE		B
D22 -26			HSS104	DIODE	M	A
D22 -26			1SS133	DIODE	M	A
FL1		*	FIP7AM7R	FLUORESCENT INDICATOR TUBE		
IC1			UPC7805H	IC(VOLTAGE REGULATOR/ +5V)		
IC2			M51951ASL	IC(SYSTEM RESET)		
IC3			BA6138	IC(ROOT AMP X2)		
IC4		*	TA8409S	IC(MOTOR CONTROL)		
IC5		*	M50940-197SP	IC		
IC6			NJM4565L	IC		
IC7			TC9215P	IC(ANALOG SWITCH X 6)		
IC9			UPC4570C-A	IC(OP AMP X2)	KPYX	A
IC9			UPC4570C-A	IC(OP AMP X2)		B
IC9 ,10			UPC4570C-A	IC(OP AMP X2)	M	A
Q1 -4			2SC1740S(Q,R)	TRANSISTOR		
Q1 -4			2SC945(A)(Q,P)	TRANSISTOR		
Q5 ,6			2SC2878(B)	TRANSISTOR		
Q7 ,8			2SC1845(F,E)	TRANSISTOR		
A1			W02-0975-05	ELECTRIC CIRCUIT MODULE		
A1		*	W02-1043-05	OPTIC RECEIVING MODULE		

E: Scandinavia & Europe K: USA P: Canada
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X: AAFES(Europe) X: Australia

J: JAPAN MADE
S: SINGAPORE MADE
A: KA-99
B: KA-109

△ indicates safety critical components.

<KA-99>

(For U.S.A. and Canada)

Rated Power Output

120 watts per channel minimum RMS, both channels drive, at 8 Ω from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortion. (FTC)

Total Harmonic Distortion LINE input to SPEAKER output

(20 Hz to 20,000 Hz) 0.03% at 1/2 rated power into 8 Ω
(1 kHz) 0.01% at 1/2 rated power into 8 Ω

Inter Modulation Distortion (60 Hz: 7 kHz=4:1) 0.03% at rated power into 8 Ω

Frequency Response 10 Hz to 50 kHz, +0 dB, -3 dB

Input Sensitivity/Impedance

Phono 2.5 mV/47 k Ω

Tuner, Tape play, CD, AUX, VIDEO 150 mV/47 k Ω

Signal-to-Noise Ratio (IHF-A)

Phono 75 dB for 2.5 mV input

Tuner, Tape play, CD, AUX, VIDEO 100 dB

Phono Maximum Input Level 100 mV, T.H.D. 0.3% at 1 kHz

Output Level/impedance

Tape REC (Pin) 150 mV/3.3 k Ω

Phono Frequency Response RIAA standard curve ± 0.5 dB (20 Hz to 20,000 Hz)

Tone control

Bass ± 10 dB (at 100 Hz)

Treble ± 10 dB (at 10 kHz)

Loudness Control +8 dB at 70 Hz (at -30 dB volume level)

General

Power Consumption 4A

Dimensions W: 440 mm (17-5/16")

H: 133 mm (5-1/4")

D: 281 mm (11-1/16")

Weight (Net) 8.9 kg (4.0 lb)

(For other countries)

Maximum Continuous Power Output

(IHF '66) from 20 Hz to 20,000 Hz,

0.05% T.H.D. at 8 Ω 110 W + 110 W

1,000 Hz, 0.05% T.H.D. at 8 Ω 135 W + 135 W

Music Power at 8 Ω 220 W + 220 W

Total Harmonic Distortion LINE input to SPEAKER output

(20 Hz to 20,000 Hz) 0.03% at 1/2 rated power into 8 Ω

(1 kHz) 0.01% at 1/2 rated power into 8 Ω

Inter Modulation Distortion (60 Hz: 7 kHz=4:1) 0.03% at rated power into 8 Ω

Frequency Response 10 Hz to 50 kHz, +0 dB, -3 dB

Input Sensitivity/Impedance

Phono 2.5 mV/47 k Ω

Tuner, Tape play, CD, AUX, VIDEO 150 mV/47 k Ω

Mic 1.3 mV/10 k Ω

Signal-to-Noise Ratio (IHF-A)

Phono 75 dB for 2.5 mV input

Tuner, Tape play, CD, AUX, VIDEO 100 dB

Phono Maximum Input Level 100 mV, T.H.D. 0.3% at 1 kHz

Output Level/impedance

Tape REC (Pin) 150 mV/3.3 k Ω

Phono Frequency Response RIAA standard curve ± 0.5 dB

(20 Hz to 20,000 Hz)

Tone control

Bass ± 10 dB (at 100 Hz)

Treble ± 10 dB (at 10 kHz)

Loudness Control +8 dB at 70 Hz (at -30 dB volume level)

General

Power Consumption 220 W

Dimensions W: 440 mm

H: 133 mm

D: 281 mm

Weight (Net) 8.9 kg

KA-99/KA-109

SPECIFICATIONS

KA-99/KA-109

ACCESSORIES

<KA-109>

Rated Power Output

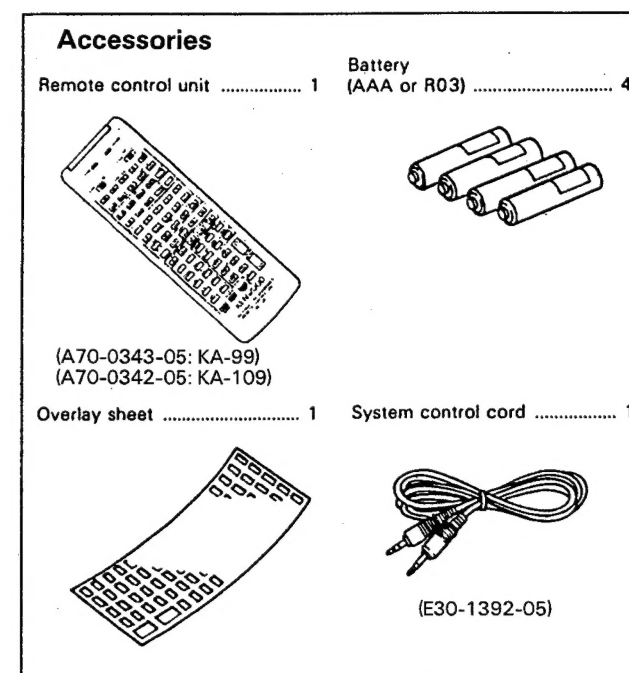
120 watts per channel minimum RMS, both channels driven, at 8 Ω from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortion. (FTC)

Both channel driven, 1,000 Hz at 8 Ω	135 W + 135 W
Total Harmonic Distortion LINE input to SPEAKER output	
(20 Hz to 20,000 Hz)	0.03% at 1/2 rated power into 8 Ω
(1 kHz)	0.01% at 1/2 rated power into 8 Ω
Inter Modulation Distortion (60 Hz:7 kHz = 4:1)	0.03% at rated power into 8 Ω
Frequency Response	10 Hz to 50 kHz, +0 dB, -3 dB
Input Sensitivity/Impedance	
Phono	2.5 mV/47 k Ω
Tuner, Tape play, CD, AUX, VIDEO	150 mV/47 k Ω
Signal-to-Noise Ratio (IHF-A)	
Phono	75 dB for 2.5 mV input
Tuner, Tape play, CD, AUX, VIDEO	100 dB
Phono Maximum Input Level	150 mV, T.H.D. 0.3% at 1 kHz
Output Level/Impedance	
Tape REC (Pin)	150 mV/330 k Ω
Phono Frequency Response	RIAA standard curve \pm 0.5 dB (20 Hz to 20,000 Hz)
Tone control	
Bass	\pm 10 dB (at 100 Hz)
Treble	\pm 10 dB (at 10 kHz)
Loudness Control	+8 dB at 100 Hz (at -30 dB VOLUME Level)

General

Power Consumption	5 A (U.S.A. & Canada models)
Dimensions	
W : 440 mm (17-5/16")	
H : 133 mm (5-1/4")	
D : 281 mm (11-1/16")	
Weight (Net)	8.9 kg (19.6 lb)

Note: KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.



KENWOOD CORPORATION

Shionogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD U.S.A. CORPORATION

2201 East Dominguez Street, Long Beach, CA 90810;

550 Clark Drive, Mount Olive, NJ 07828, U.S.A.

KENWOOD ELECTRONICS CANADA INC.

P.O. BOX 1075, 959 Gana Court, Mississauga, Ontario, Canada L4T 4C2

TRIO-KENWOOD U.K. LIMITED

KENWOOD House, Dwight Road, Watford, Herts., WD1 8EB United Kingdom

KENWOOD ELECTRONICS BENELUX N.V.

Mechelsesteenweg 418 B-1930 Zaventem, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH

Rembrücker-Str. 15, 6056 Heusenstamm, West Germany

TRIO-KENWOOD FRANCE S.A.

13 Boulevard Ney, 75018 Paris, France

KENWOOD LINEAR S.p.A.

20125, MILANO-VIA ARBE, 50, ITALY

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. (INCORPORATED IN N.S.W.)

4E Woodcock Place, Lane Cove, N.S.W. 2066, Australia

KENWOOD & LEE ELECTRONICS, LTD.

Wang Kee Building, 4th Floor, 34-37, Connaught Road, Central, Hong Kong